● 133, 113

Kerala AW11

[For a regional division of the Indian sub-continent see Chapter XIII, 6: Spate AW1 India.]

133, 113

Kerala AW11

[For a description and discussion of the structure and relief of the entire Indian sub-continent, see 6: Spate, AW1 India, category 116, pp. 3-36.]

● 133, 113 Kerala AW11

[For general information on the distribution of various types of flora and its relation to climate and soil, see 6: Spate AW1 India, category 116, pp. 63-92.]

[1] THE KINSHIP SYSTEM OF THE NAYARS OF MALABAR

I The Malabar Coast

(1) Physical Features

131 The Malabar Coast lies in the extreme south-west of India, along the shores of the Arabian Sea. The coastline is 360 miles long, the area 14,908 square miles. It is divided off from the rest of South India by the Western Ghats, a mountain wall broken only in the centre of the [167] area by the Palghat Gap. Though periodic immigrations have taken place from the eastern plateau of peninsular India into the coastal region, the mountains prevented close contacts between the people who became established there [177] and their neighbors to the east. On the other hand, its position laid the area open to contacts by sea with many peoples, including Jews and Arabs (1,000 B.C.), Egyptians and Phoenicians (5th century B.C.), Romans (1st century A.D.), Chinese (6th century A.D.), and after 1498 the Portuguese followed by the English, Dutch and French.

133 The coast falls roughly into three natural divisions: the coastal strip, the midlands, and the highlands rising into the Ghats.

[241] The coastal strip is flat and sandy. Its chief product is coconuts, with some rice and bananas. [2] In the southern half of the area it is broken by salt-water lagoons which for over 100 miles form a continuous navigable chain, parallel to 133 the sea. Almost all the chief towns (from north 361 to south, Cannanore, Tellicherry, Mahé,

133 Calicut, Cochin, Alleppey, Quilon and Trivan-
361 drum), are situated on the coast, divided by chains of little fishing villages. In the northern
133 half a railway runs along its edge from Manga-
361 lore in South Canara, southeast to Shoranur,
496 where it divides and turns off northeast to Mad-ras and south to Ernakulam, the capital of Cochin State. In the extreme south another railway comes in from Tinnevelly District in the east, and follows the coast from Quilon to Trivandrum. (See Map 1.)

133 The midlands comprise low hills and fertile
241 valleys. Broad strips of alluvial rice-lands lie in the valleys, thinning out as the land rises into the foothills of the Ghats. On the hill slopes are gardens of coconut palms, tapioca, plantains, pepper, ginger, rubber, cashew-nut trees, and many fruit trees such as jack and mango. Cashews (introduced by the Portuguese) and pepper have become for the past 100 years particularly important cash crops on the hill-slopes of North Malabar District, while bamboo is more prevalent in South Malabar District and Cochin. The coconut is ubiquitous and very important in the total economy. There are a few small bazaar
[361] towns, [3] but most of the people live in villages, on garden land surrounding or surrounded by wet paddy-flats.

133 The highlands rising into the Ghats are covered
[136] mainly by thick virgin forests harbouring wild elephant and small tigers. The foothills are
[162] sparsely populated by people of the same cultural groups as are found in the plains, while higher in the mountains live primitive tribes.

2:Gough E-4, 5 (1947-1949)1961 A Wll Kerala A Wll
Central Kerala Nayar

conquests; that is, from 1342, the date of the first useful Arabic account (Gibb, 1929) to the end of the eighteenth century. My sources include English translations of the writings of Arab, Italian, Portuguese, Dutch, and French visitors to Kerala, works by English travelers, government servants, historians, and anthropologists, and a few historical works by Indian scholars who make use of indigenous Malayalam and Sanskrit documents.

Modern changes in Nayar kinship are not evenly distributed throughout the population. Some of the traditional institutions and relationships persist, especially in villages most remote from the seats of government and from modern market centers. Many other traditional usages are remembered by older people. Because of this, my own field work in three villages of Kerala—between November, 1947 and July, 1949—was able to provide me with the organizational framework into which to fit the literary material, and supplied me with many details on the traditional system not hitherto published.[2] Some information was also gleaned from genealogies, manuscript histories of particular lineages, and translations of Malayalam documents relating to land tenure, property transactions, and religious rites.

Modern changes in Nayar kinship comprise a large subject, which I have already briefly treated elsewhere (Gough, 1952*a*; see also Rao, 1957: 74–142). A full account will appear in a forthcoming book.

Ecology

Kerala, or the Malabar Coast, lies in the extreme southwest of India beside the Arabian Sea. The coastline is some 360 miles long, the area about 14,908 square miles. It is divided from the rest of South India by the Western Ghats, a mountain wall broken only in the center by the Palghat Gap. From prehistoric to modern times, migrations took place from the eastern plateau of peninsular India into the coastal region, but until the coming of modern transport the mountains prevented continuous contacts between the people who became established there and their neighbors to the east. On the other hand, its position laid Kerala open to contacts by sea with many peoples, including Jews and Arabs (from perhaps 800 B.C.), Egyptians and Phoenicians (ca. fifth century B.C.), Romans (first century A.D.), Chi-

[2] My field work in three villages of Central and North Kerala was made possible by the grant of a William Wyse Studentship from Trinity College, Cambridge, and of an Anthony Wilkin Studentship from the Faculty of Archaeology and Anthropology, University of Cambridge. The preparation and writing of these chapters have been carried out with the aid of two grants from the Social Science Research Council, in 1954 and 1956.

2:Gough E-4, 5 (1947-1949)1961 A Wll Kerala A Wll
Central Kerala Nayar

177 nese (from at least the sixth century) and after 1498 the Portuguese, followed by the English, Dutch, and French (Logan, 1951, I: 251–254, 258, 294–399).

● 133 The coast falls roughly into three natural divisions: the coastal strip, the midlands, and the highlands rising into the Ghats (cf. Buchanan, [245] 1807: 565–566). The coastal strip is flat and sandy. Its chief product [243] is coconuts, with some rice and bananas. In the southern half it is broken by salt-water lagoons which for over a hundred miles form a continuous navigable chain parallel to the sea. Most of the chief 361 towns are situated on the coast, divided by chains of little fishing vil- [487] lages. Many of the coast towns are ancient, and most of them lie at the mouths of navigable rivers which flow westward from the Ghats. [439] From time immemorial raw materials, chiefly pepper, were brought by boat from the inland hillsides for shipment from these ports.

133 The midlands comprise low hills and fertile valleys. Broad strips of alluvial rice lands lie in the valleys, thinning out as the land rises 245 into the foothills of the Ghats. On the hill slopes are gardens of co- conut palms, bananas, pepper, ginger, and many fruit trees such as [439] jack and mango. It was probably wild pepper which was exported in Roman times, but pepper and other spices have been deliberately [177] cultivated at least since 1290 (Ricci, 1931: 328). Cashew nuts, in- troduced by the Portuguese, formed an additional export crop. Small 361 merchant settlements, market-centers, and the military fortifications of 443 petty chiefs existed at strategic points on river banks. Some of these centers grew into bazaar towns in the nineteenth century. But the mass of the population traditionally lived, as today, in scattered vil- lage communities on garden land surrounding or surrounded by fields 243 of wet rice, the main subsistence crop. Wet-rice cultivation depended 231 on plough agriculture with teams of oxen or water buffalo. Goats and chickens were the other significant domestic animals.

361 The highlands rising into the Ghats were covered mainly by de- [133] ciduous forests. The foothills, interspersed with occasional rice flats, were sparsely populated by people of the same cultural groups as those in the plains. They eked out their wet-rice cultivation with gar- [241] den crops of fruits, spices, and vegetables, with shifting hoe cultiva- [224] tion of dry grains on hillsides, and with forest hunting of elephant, deer, and pig. Higher in the mountains lived primitive tribes of hunt- ers and shifting cultivators, having only occasional contacts with the kingdoms of the plains.

132 Throughout most of the area Kerala's rainfall varies between 75 and 170 inches, being heaviest in the north where the mountains are

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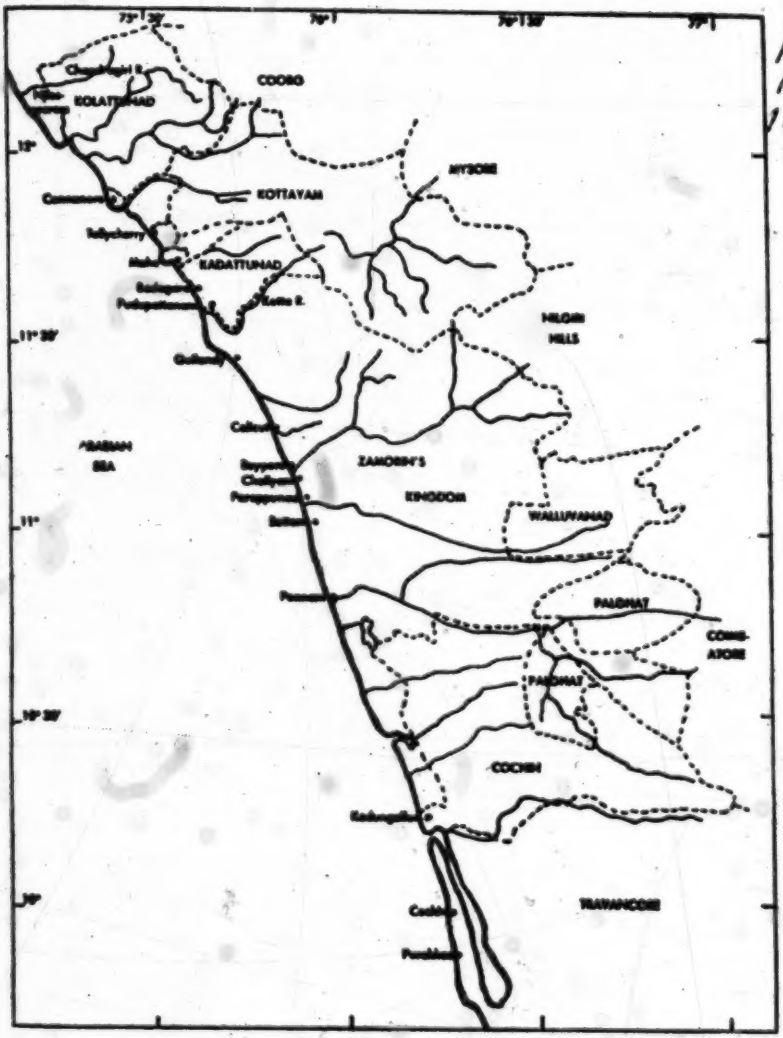

Fig. 6-1. Rough boundaries of the Kingdoms of Central and North Kerala in the mid-eighteenth century. (Adapted from C. A. Innes, 1908: 44–45.)

[p. 301]

2:Gough E-4, 5 (1947-1949)1961 A W11 Kerala A W11
Central Kerala Nayar

nearer to the sea (Innes, 1908: 270). The temperature varies from 70° to 90° and humidity is always high. Unlike most of the great kingdoms of India, Kerala had no single great river and no extensive, centrally organized irrigation system. Instead, her cultivated crops and lush vegetation depended on the heavy rainfall and numerous small rivers and streams by means of which small-scale irrigation was easily possible to groups of families.

Further, the heavy rainfall, seasonal floods, and hilly terrain made communications difficult until modern times. Before the partial conquest of Kerala by Mysoreans from the northeast in 1766, there were no roads, wheeled vehicles, or pack animals. The kings maintained small cavalry forces only in the coast towns, traveled in palanquins, and employed runners to carry messages to their vassal chiefs. Goods were dragged downstream by elephants, transported in boats, or carried on the backs of men. Armies moved slowly; local nobles sometimes rebelled against their rulers but warfare was abandoned in the heavy southwest monsoon season from May to September. The difficulty of communications and the lack of a centrally organized irrigation system may have been connected with the fact that Kerala had no regular land tax until the 1730's (*ibid.*: 308). Instead, the revenues of her rulers came from tribute in kind supplied by subordinate nobles, and from taxes levied upon overseas trade (Logan, 1951, II: ccxviii; Innes, 1908: 307–308).

In spite of the overseas trade, most of Kerala's villages were traditionally self-sufficient for the basic necessities of life. Quantities of manufactured goods were brought to Kerala's ports from other parts of India for shipment to the Middle East, but indigenous crafts such as weaving, metalwork, pottery, and basketry remained simple and served local needs. Kerala thus had no large urban castes of craftsmen and no indigenous merchant castes, but only immigrant communities of Syrian Christian, Jewish, Muslim, and, later, European merchants and Hindu merchants from other kingdoms of India, all concentrated in the coastal towns. The limited nature of trade and crafts and the comparative self-sufficiency of village life also help to account for the relatively decentralized political structure.

History

Little is known of Kerala until the first century A.D. It then formed part of the kingdom of Chera, whose capital was probably east of the Ghats at Karur on the Kaveri River in the modern Trichinopoly district. Chera, like its companion South Indian kingdoms, Chola and

3:Gough E-4, 5 (1947-1949)1961 AWll Kerala AWll
North Kerala Nayar

Nayar: North Kerala

The Nayars of North Kerala live between the Chandragiri and the Kora rivers. This area lay north of the Calicut kingdom and had been conquered by the Kolattiri kings at some period before the fourteenth century (Logan, 1951, I: 283; Innes, 1908: 57). It then disintegrated into the small kingdoms of Kolattunad, Kottayam, and Kadattunad. North Kerala was invaded from the Bednur kingdom of South Canara in the 1730's. It was later occupied by Muslim armies from Mysore between 1766 and 1792, after which it passed under British rule (Logan, 1951, I: 360, 399–473). This account deals with conditions before 1760, so far as these are known, and with the major changes of the nineteenth century.

Ecology

The mountains approach nearer to the sea in North Kerala than in Central Kerala. There are fewer stretches of lowland suitable for wet-rice cultivation, and gardens of fruits, nuts, vegetables, and spices on hillsides are more extensive. Since rice was the main subsistence crop, population density was lower than in Central Kerala. The houses of a village (*dēsam*) were scattered in gardens on hillsides surrounding a wet-rice flat in a valley. Villages were often separated by three to six miles of uncultivated scrub or jungle. Until the Mysoreans built roads after the 1760's, transport and communication by narrow mountain paths were difficult, especially in the heavy monsoons.

North Kerala had four major ports during the period of European trade—Cannanore, Tellicherry, Mahé, and Badagara (Hamilton, ed. 1727: 369–371). Pepper and other spices were exported from inland villages probably from Roman times, but villages were virtually self-sufficient for food until the mid-eighteenth century. After that time the Mysoreans' roads permitted greater import of goods both from the coast and from Mysore, and greater spatial mobility. In the nineteenth century cash-crop farming for export increased, as did imports of

4:Gough E-5 (1947-1949, 1952)1958 AWll Kerala AWll
Nayar

[P 446]

CULTS OF THE DEAD AMONG THE NĀYARS

By E. Kathleen Gough

IN this paper I shall attempt both a sociological and a psychological analysis of Nāyar cults of the dead. That is to say, I shall try to relate the role-structure and social functions of the cults to those of legal and economic institutions, and to relate the emotional content of the cults to that of certain relationships among the living.

The Nāyars[1] are a high, matrilineal caste of landholders and salaried workers. Some four to seven matrilineal lineages of commoner Nāyars traditionally occupied the high caste area of a village. They served a Nāyar or Nambūdiri Brahman village headman, and had authority over tenants, artisans, and serfs of lower caste. The lineage was exogamous, had a depth of about ten to fifteen generations and was concerned in village government. But the more significant economic unit was a lineage segment (*taravād*), whose members jointly owned property including an ancestral house. The eldest man of this group was its legal guardian (*kāranavan*).

Before British rule began in 1792, the Malabar Coast comprised a number of kingdoms. I am concerned with Nāyars of villages in the former Cochin kingdom, in the center of the coast, and with those of villages in the former Kottayam kingdom in the north.

In Cochin, the country was relatively flat, fertile, and densely populated. The Nāyars were the professional military caste. For a part of each year they tended to be absent from the village in military training or war. Women remained on their ancestral estates under the legal guardianship of the *kāranavan* and were maintained by the work of tenants and serfs. Probably largely as a result of the relatively mobile military occupation of the men, plural marital unions were customary. A woman might have six or eight husbands of her own or a higher subcaste, and a man, any number of Nāyar wives of his own or a lower subcaste. Residence was duolocal: spouses lived separately in their natal homes and a husband visited his wife in her home at night. Exact physiological paternity was, clearly, often unknown, and in any case a man had no rights in nor obligations to his children. Among Nāyars of this area, therefore, contrary to Murdock's generalization,[2] the elementary family was not institutionalized as a legal, economic or residential unit.

In Kottayam, the terrain was mountainous and jungly, the area more sparsely populated, and the kingdom less centralized. The Nāyars were cultivating landowners and only occasional warriors. The hilly and jungly terrain and the sparsity of population made duolocal residence impracticable. In most cases a man took his wife to live in his ancestral household in avunculocal residence, and children were brought up until adolescence in the houses of their fathers. There was some polygyny, but polyandry was forbidden. Fathers had morally though not legally recognized rights in and

6:Fawcett G-5 (ca. 1900)1915
AWll Kerala AWll
Nayar

lucky moment for the setting out on this particular occasion on the last day's stage of the journey was at the rising of the constellation of Aquarius.

"The *Tirunāvāyi* temple stands on the north bank of the Ponnāni river close to the present line of railway. Passengers by train can catch a glimpse of it by looking across the level expanse of paddy-fields which lie south of the sixth telegraph post on the three hundred and eighty-second mile of the railway. There is a modest clump of trees on the river bank hiding the temple, the western gateway of which faces a perfectly straight piece of road a little over half a mile in length stretching from the temple gateway westwards to the elevated ridge hemming in the paddy-fields on the west. This road is but little raised above the level of the paddy flat. Directly facing this straight piece of road as the elevated ridge is reached there are three or perhaps four terraces, the outlines of which may still be traced in the face of the precipitous bank.

"A little to one side of the upper terrace are the ruins of a strongly built powder magazine, and on the flat ground above and on both sides of the fine avenue shading the public road at this place is ample space for the erection of temporary houses.

"In a neighbouring enclosure under cultivation is a disused well of fine proportions and of most solid construction.

"From the upper terrace alluded to a commanding view is obtained facing eastwards of the level rice-plain at foot, of the broad placid river on the right backed by low hills, of higher flat-topped laterite plateaus on the left, their lower slopes bosomed in trees, and, in the far distance, of the great chain of Western Ghâts with the Nilgiris in the extreme left front hardly distinguishable in their proverbial colour from the sky above them. It was on this spot, on a smooth plateau of hard laterite rock, raised some 30 to 40 feet above the plain, that the Zamorin used several times in the course of the festival to take his stand with the sword of Chēramān Perumāl, the last emperor, in his hand.

"The sword is and has been for centuries, slowly rusting away in its scabbard, but it is not alone on it that the Zamorin depends for his safety, for the plain below him is covered with the 30,000 Nâyars of Ernâd, the 10,000 of Polanâd and numberless petty dependent chieftains, each counting his fighting men by the hundred or the thousand or by thousands. Away on the right across the river are the camps of the second prince of the Zamorin's family and of the dependent Punnattūr Raja; the third, fourth, fifth, and sixth princes' camps too are close at hand in the left front behind the temple, and behind the terrace itself is the Zamorin's camp.

"The whole scene is being made gay with flags as an elephant is being formally caparisoned with a chain of solid gold

7:Gough E-5 (1947-1949)1955 AWll Kerala AWll
Nayar

collapsed and the old system of differential land-rights between Nambûdiris and rulers on the one hand and their Nayar tenants on the other has been seriously undermined. Yet even today Nayars remark with pride that their lineage has 'fathers' in the lineages of their former landlords and chiefs, while chiefs and royalty alike revere their Nambûdiri *genitors*, and boast that the blood of these Gods of the earth is running in their veins.

Part II. The Nayar *Tali*-Rite in North Malabar

North Malabar lies north of the Kora River, being the old kingdoms of Kolattiri, Kurumbrattiri, and Kadattunad. Except for the coast-towns expanded by Europeans, it is sparsely populated and mountainous; part of it is forest. Villages lie separated by hill ranges, usually as clusters of houses on the hillsides surrounding small wet paddy-flats in the valleys. This contrasts with South Malabar and Cochin, where the coastal plain is wider, paddy-land extensive, and settlement usually continuous between villages.

Perhaps because of its difficult environment, North Malabar did not before 1792 approach the degree of political centralization achieved in the central area. The Kolattiri Rajas, it is true, temporarily conquered Kottayam, Kurumbranad, and Kadattunad, but the area was never consolidated as was the Zomorin's kingdom. Within the small kingdoms, *nâduvaris* fought each other and rebelled against their Rajas, allying themselves with different rulers as suited their needs of the moment. Neighbouring *desavaris* sometimes fought each other within the *nâd*, while within the *desam*, *kudipaga* (lineage-feud) persisted till modern times.

Consistent with this lack of political centralization, high-class Nayars were not divided into sub-castes with administrative and occupational functions. Instead they had exogamous clans, dispersed between many villages. In Kottayam and Kolattunad the bulk of Nayars were Nambiars, independent land-owners owing only nominal allegiance to a chief. *Desavaris*, appointed by the Raja or the *nâduvari*, had administrative powers in their villages but belonged to the same sub-caste as other Nambiars. In most villages the land was divided between the Nayar property-groups as owners, Nayar tenancies being less common than in the south. *Nâduvari* lineages, however, usually owned the land in the whole village where they lived, employed Nambiar tenants as retainers, and claimed superior caste-rank, calling themselves Samantan Nambiars. Nambûdiri Brahmans are fewer in the north than in the south, especially since the Muslim invasions from Mysore in the 1760s, when many fled to Travancore. Those who remain live as landlords in widely separated villages, with local Nambiar lineages as retainers. The Nayar servant castes are spatially distributed as in the south. The lower polluting castes of manual workers are present in similar proportions, but Tiyyars and their washermen and barbers are matrilineal in North Malabar, patrilineal in the south.

The Nayar Kinship System. North Malabar Nayars, though trained in arms in the private gymnasia of their lineages, were not recruited as a permanent militia of the kingdom. Instead they cultivated their own lands with the aid of Tiyyar tenants, the serf castes being absent over most of the area. It seems largely because of this difference of occupation, North Malabar Nayars are virilocal: a wife moves on marriage to the ancestral house of her husband, and remains with him with rare exceptions till his death. Her children are brought up by their father and commonly return to their own lineage at puberty. A boy then begins to manage his *tarawâd* property under the direction of his *kâranavan*, while a girl is shortly afterwards married, from the lineage house, by common consent of her *kâranavan* and her father, often to the *kâranavan*'s son or to a maternal nephew of the father.

Divorce is permitted, but is rarer than in the south. Polygyny is rare, polyandry even traditionally forbidden. A cuckolded husband formerly cut off the hair of his wife and returned her to her lineage. The *genitor* has customary rights in and obligations to his children. In

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

MAP 1

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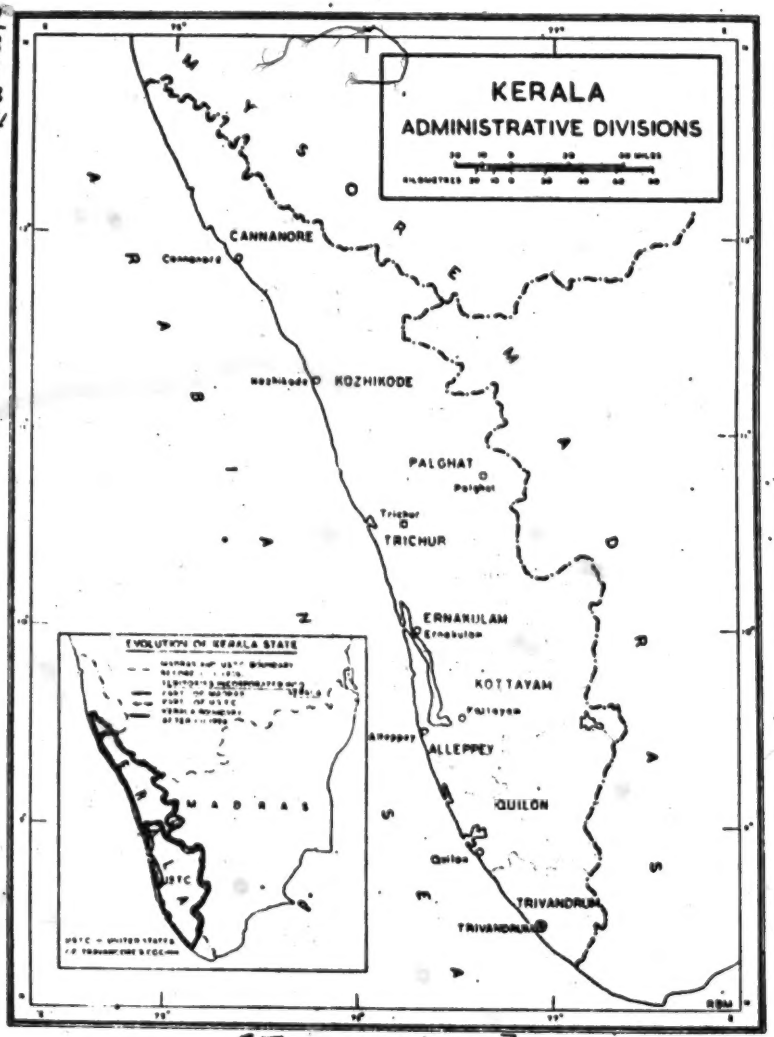


[Frontis Piece]
[facing p. 1]

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

Chapter 1

The Setting

KERALA IS THE smallest State in the whole of India.[1] It is a narrow strip of land along the western coast of India. It has an area of 14,992 square miles[2] and the coastal line is nearly 360 miles. The breadth of the State varies from 20 to 75 miles, as one moves from the extreme north to the middle. Its boundaries touch the State of Mysore in the north and that of erstwhile Madras in the east and south-east. It lies between 8°15′ and 12°45′N latitude and 74°50′ and 77°30′E longitude.

1.2 Kerala was created in 1956 at the time of the reorganization of the State through the integration of the erstwhile State of Travancore-Cochin and the Malabar district and the Kasargod taluk in South Kanara district of the erstwhile Madras State. At the same time Travancore-Cochin lost Kanyakumari, part of the Trivandrum district and Shencottah, part of the Quilon district, to Madras State. However, the net area of the State increased by about two-thirds after the reorganization of the State. Prior to the formation of Kerala as a separate State, Travancore-Cochin was administratively divided into four districts, while Malabar was a single district. At the time of integration, Malabar was broken up into three districts. Subsequently, during 1957 two new districts, viz., Alleppey and Ernakulam were carved out of the territory belonging to Trichur, Kottayam and Quilon. The State, therefore, now comprises nine districts. The total length of the State from its northern extremity to the southern tip is about 360 miles. But its width is nowhere more than 75 miles.

PHYSICAL FEATURES

1.3 The State territory may be broadly classified into three natural sub-divisions, the highland, the midland and the lowland. Western Ghats which range along the eastern border of the State form the highland. This is mostly a mountainous and rocky terrain ranging in height from 3,000 ft. to 8,000 ft. Anamudi, the highest peak of the Western Ghats (8,837 ft.) is located in the Kottayam district. The highland is thickly forested in its upper ranges, while in the lower ranges the forests are interspersed with plantations.

1.4 On the western fringe of the State are the lowlands which stretch along the coastal plain. Coconut palms, which cover most of this area, lend a richness to the landscape of the region. The soil in this plain is sandy. Coir-making and fishing are the two main occupations. Sandwiched between the lowland and the highland

[1] Excluding the Union Territories.

[2] *Statistical Outline of Kerala State*, Department of Statistics, Government of Kerala.

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

133 [24] is the undulating terrain of the midland with laterite soil. This middle region is rich in agricultural produce ; paddy, tapioca, spices and cashewnut being some of the main crops of this area.

Climate and Rainfall

132 1.5 The same diversity which characterizes the physical features of the State, also occurs in case of the climatic conditions. Whereas the highland has a cool and bracing climate throughout the year, the plains are hot and humid. However, the range of variation in temperature is very narrow, the normal limits being 80°–90°F.

1.6 The average level of annual rainfall is quite high being in the neighbourhood of 96 inches. In fact only Konkan and Malabar–South Konkan region with 109 inches and 121 inches surpass Kerala in the annual volume of rainfall. Since Kerala is fortunate in getting precipitation both from the south-west and the north-east monsoons, the rainfall is fairly spread out over the year. January to April are practically the only months which are completely dry. Moreover, annual variations in rainfall are also comparatively low. The co-efficient of mean deviation of annual rainfall is only 6.5 which is lower than that of all the other States, except Assam (Table 1).[1] Draughts are, naturally, rare.

ECONOMIC CONSEQUENCES OF THE PHYSICAL CHARACTERISTICS

133 1.7 The influence of geological formation and geographical features on the economic structure and the growth possibilities varies from region to region. However, some of these stand out distinctly in the case of Kerala. The high mountainous wall of the Western Ghats and its close proximity to the sea is responsile for the heavy and regular rainfall which this State receives. The high characteristic rainfall, in turn, is responsible for a number of features of this State. The large number of high value yielding plantation crops and the rich forest growth owe their existence to the rainfall and the suitable climatic conditions found in the Western Ghats. The abundant rainfall has also provided Kerala with a large number of rivers. These are the storehouse of water resources—one of the chief assets of Kerala. There are 44 rivers in addition to a much larger number of small rivulets and streams. Forty-one of these rivers are west flowing and yield a total run off of 2,500 T.M.C. ft.[2] This is as high as 5 per cent of India's total water potential, whereas the total area of Kerala is only about 1.2 per cent of the area of India.

1.8 Since the Western Ghats are in close proximity of the sea coast, most of the rivers are also very short, the average length being only 40 miles. Only four rivers, viz., Beypore, Bharatapuzha, Periyar and Pamba are more than 100 miles in length. Although the rivers are small, they carry sizable flows and these provide the State with rich irrigation potential.

[text continues on p. 4]

[1] Table 1 refers to the States as they existed before the reorganization. The conclusions, strictly speaking, refer to only Travancore-Cochin. However, they are broadly true of Kerala as a whole also.

[2] T.M.C. ft.—Thousand Million Cubic Feet.

Source: *Water Resources of Kerala*, PWD, Government of Kerala.

[13] * [Table 1, appearing on p. 269 of the text, has not been processed -- Analyst]

11: India G-4, 5 (1960-1961) 1962 AW11 Kerala AW11

1.9 The distance within which these rivers descend to the sea level being very short, there are generally a large number of steep falls or a series of cascades in their courses. These provide a rich potential for generation of hydro-electric power, which can be generated at a low cost (1.7 nP per kWh on an average). This low cost power potential is an important asset of Kerala from the point of view of the future programmes of industrialization.

1.10 Some other implications of topographical features are not so obvious. For example, the lakes, the lagoons and the backwaters fringed with coconut palms, no doubt, impart to Kerala its characteristic scenic beauty and provide one of the chief tourist attractions. Their importance, however, goes much beyond the purely aesthetic aspect. In fact, the backwaters—especially in the Travancore-Cochin region—are indirectly responsible for providing the means of livelihood to a vast section of the population. Coir spinning, the chief industry of Kerala, is located in this State primarily because of the natural retting facilities provided by the backwaters. The availability of these facilities is unique in the case of Kerala. In almost all other coconut-growing areas of India, the coconut husks go waste because of the absence of natural retting facilities. Since coir industry provides an occupation to 4 to 5 lakh persons (about 10% of the total working force and 40% of industrial working force), one can well imagine what the unemployment situation in Kerala would have been in the absence of the backwater facilities. The backwaters have also facilitated the development of a wide network of inland waterways all along the coastline. Apart from employing a large number of persons in towing or rowing the boats, the inland waterways provide inexpensive modes of transporting the agricultural produce and light industrial goods manufactured in the coastal area.

1.11 Up till now only some of the favourable consequences of physical features have been pointed out. The sloping terrain and preponderance of backwaters in the coastal area also possess a negative aspect. The heavy downpour is gradually leaching off the mineral content of the soils, thus rendering them generally poor in their fertility status. One of its ultimate consequences is the fact that livestock feed available in Kerala is deficient in mineral content and this in turn reduces the yield of milk of the livestock. The heavy precipitation of rain also creates a serious flood control problem in Kerala.

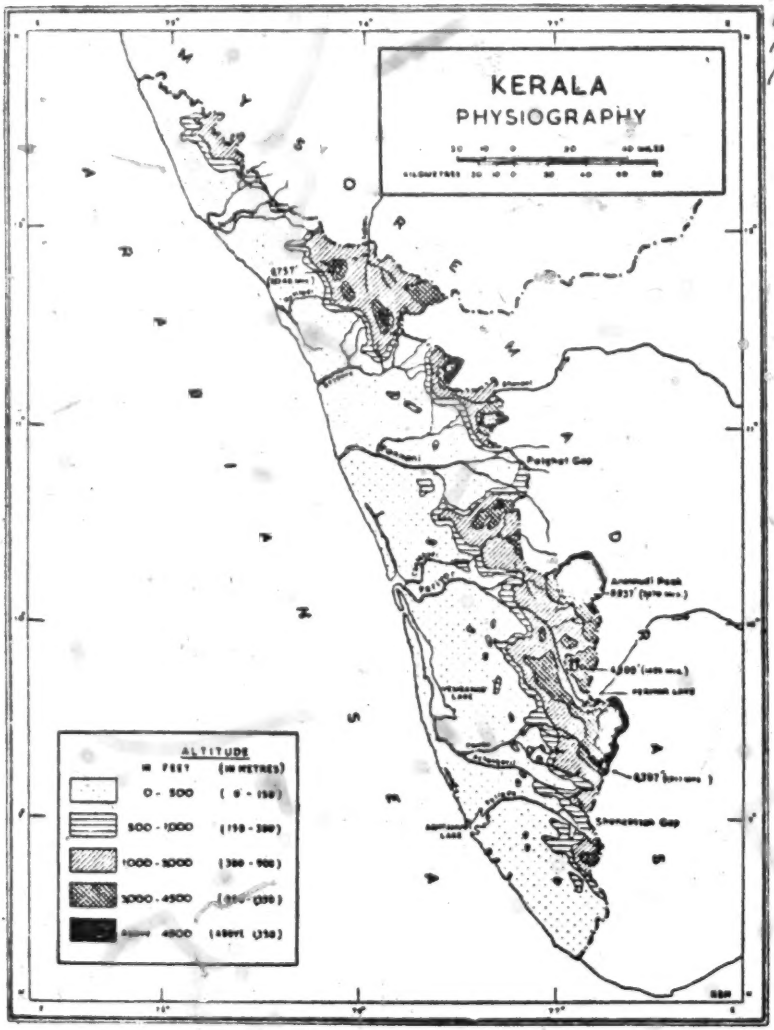
1.12 The backwaters raise other problems as well. During the dry summer months saline water from these flows into the lower reaches of the rivers, many of which fall into the backwaters. This has an adverse effect on cultivation and the supply of drinking water in the coastal areas. Coastal areas are, therefore, beset with the problem of salinity control. The chain of consequences does not stop here. Recently implementation of one of the important salinity control measures in Kerala, viz., the Thanneermukkom bund across the Vembanad lake has created a new problem in its wake. The accretion of limeshell deposits, an important raw material found in the lake, depends on the high salinity of the lake water. Since, after putting up of the barrage salinity of water will get reduced, it will have adverse repercussions on the long run supply position of the limeshells. This, in turn, jeopardizes the long run prospects of the cement industry in the State which is based on the limeshells.

[Text continues on p. 6]

II: India G-4,5 (1960-1961) 1962 AWII Kerala AWII

[P 5]

MAP 3



11: India G-4, 5 (1960-1961) 1962 AW11 Kerala AW11

per acre, while the same for paddy is only 40 :40 :30. It is very low for leguminous crops—at 0 :20 :20 for pulses and 20 : 20 : 20 for groundnuts.[1] These dosages are not the optimum. These are just the average that may be considered adequate during a period of shortage of fertilizers. There are many farmers who apply as much as 80 lbs. of nitrogen per acre to rice while there are others who, on account of shortage of fertilizers apply only 15 lbs. per acre. Since fertilizer allocations are not made for individual crops, a dosage ratio of NPK 40 : 40 : 30 per acre may be considered as an average requirement for the State in the future. But in view of shortages in the country for phosphatic and potassic fertilizers, the dosage may be put at 40 : 20 : 15. The total annual requirements of crop fields on this basis would be 35,700 tons of nitrogen, 17,700 tons of P_2O_5 and 13,400 tons of K_2O.

2.47 In view of the peculiar soil conditions and reaction, attention will have to be paid to the correct choice of fertilizers. At present fertilizers are being used indiscriminately. For example, ammonium sulphate, the most popular fertilizer in the State, is being used even on high acidity soils. Such applications may do damage to the soil by increasing further the soil acidity. The selection of various types of fertilizers in the future should, therefore, be on rational and scientific basis, so that the fertilizers also help in correcting the soil deficiencies. Urea is, perhaps, eminently suited for Kerala. It is, however, not possible to make any specific suggestion on the requisite type of fertilizers for the State as adequate data on the performance of various types of fertilizers are not available. It is, therefore, suggested that a large number of trials should be conducted all over the State with a view to choosing the right type of fertilizer and dosages for various crops in different regions. The result of such trials should be made known to users through the extension machinery.

2.48 It is not possible to give a precise estimate of the increase in agricultural production from the proposed fertilizer consumption programme owing to difficulties in estimating the share of fertilizers for different crops. Knowledge about the rates of return from fertilizers for various crops, is also inadequate. Assuming, however, that roughly three-fourths of the proposed quantity is used for rice and other foodgrains, the additional production of cereals and pulses on the basis of available yardsticks may be expected to be 387,000 tons by 1970-71.

Irrigation

2.49 *Existing Position*: Irrigation resources of Kerala are very rich. In all, there are 44 rivers in the State. The run off of water from the west-flowing rivers is estimated to be of the order of 2,560,800 million cubic feet per annum, while that of east-flowing rivers is 196,000 million cubic feet.

2.50 The first irrigation project to be taken up in the State was the Kodayar Extension Scheme which was completed by 1947. At the beginning of the First Plan

[1] Dosage for NPK (ratio in lbs. per acre for other crops) is

Tapioca	80 :80 :160	Ginger	50 :50 :100
Oilseeds	10 :20 : 20	Sugarcane	100 :80 :100
Cotton	50 :30 : 30	Fruits/ Vegetables	50 :50 :100

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

Tea

2.94 Tea is foremost among the exports of Kerala and the second most important cash crop of the State in terms of net value contributed. It also employs the largest number of persons among the plantation crops. In 1957-58, out of the total exports worth Rs. 56 crores from the ports of Kerala, tea alone accounted for Rs. 24.3 crores.

2.95 The growth of tea plant is very much influenced by natural factors such as temperature and rainfall. A warm and moist climate with a temperature range of 55°-95°F, and an aggregate of 100 to 250 inches of well distributed rainfall are ideal conditions for the growth of tea bushes. It is grown at altitudes of over 2,000 feet above sea level and requires a well drained soil for anchorage and share of trees. The Wynad range (3,000 ft. elevation) of Malabar and Kannan Devan Hills (5,000 ft. elevation) of Travancore-Cochin area possess all these attributes.

2.96 Between 1951 and 1958 the area under tea in the State increased from 93,000 to 97,000 acres, that is, by 5.4 per cent. On the output side, the production of tea in the State during 1958 was 80.0 million lbs. as against 66.4 million lbs. in 1951, registering an increase of 35 per cent. The increase in production has thus been largely due to increase in yields between 1951 and 1958. By 1958 the yield rate reached a record level of 957 lbs. per acre. This increase has been steady and is higher than the corresponding all-India rise. However, even at present the average yield per acre in Kerala is lower than that in the case of other principal tea growing States of India such as Assam, West Bengal and Madras.

2.97 Higher prices and increased demand after the last world war gave an inducement to the planters to adopt intensive techniques of cultivation such as application of large dosage of fertilizers, better management and care. These have been primarily responsible for a larger outturn per acre. However, this trend is not likely to continue indefinitely as the bushes are getting aged. Experienced planters feel that with further improvements in cultivation techniques and increased application of fertilizer mixtures, it would be possible to raise the average yield to 1,000 lbs. per acre.

2.98 *Replantation*: The economic life of a tea bush ranges from 40 to 60 years and this makes it necessary to have a planned programme of replantation. Nearly half of the tea acreage in South India was planted during the early part of the century using Assam seeds. The remainder is the old China hybrid. Till 1953 only 0.72 per cent of the tea area had been replanted.

2.99 Replanting of tea had been neglected till recently. Most of the plantation estates were distributing the major part of their profits and there was very little ploughing back. The need for replanting on an appreciable scale received recognition only about 10 years ago but the situation has not improved still. Since no profits had been ploughed back to build up reserves, absence of replantation is largely explained by the lack of financial resources with the planters. Government aid in the form of long term loans for plantation, therefore, seems to be the only solution. The Plantation Enquiry Committee examined this problem in detail and recommended the creation of a fund for replantation. No action seems to have been taken so far.

11: India G-4,5 (1960-1961) 1962 AW11 Kerala AW11

the fishing industry, owns a boat-building yard, a workshop, a cold storage and refrigeration plant and runs a training centre. The fishing villages are thus being developed into what may be called Integrated Fishing Centres.

5.11 *Off-shore Fishing*: An attempt to introduce exploratory and commercial off-shore fishing operations from Cochin port was made by the Travancore-Cochin Government as early as in 1940. A Government sponsored private company operated three large-sized (65 feet to 90 feet) vessels for a time. But these operations proved abortive and were given up owing to lack of trained crew and absence of docking and repairing facilities. Thorough exploratory investigations have been on for the last few years, and at present deep-sea fishing is being carried on jointly by the Government of India and the Indo-Norwegian Project.

5.12 *Chank Fisheries*: With the transfer of some areas of Travancore-Cochin to Madras at the time of the reorganization of States, Kerala has lost some of its important chank fishing centres along the Kanyakumari coast, and only a few centres of lesser importance, Thekkay Kollencode, Poovar, Pulinkudi, Poonthura, Shankumugham and Veri are now left with the State. The right of collection of chanks is annually auctioned on royalty basis, preference being given to cooperatives. The number of chanks collected and the money realized by the cooperatives in 1957-58 and 1958-59 were 26,629 chanks (for Rs. 16,361) and 18,355 chanks (for Rs. 9,177.50) respectively.

Inland Fisheries

5.13 Estuaries, backwaters and adjacent low-lying fields, rivers and canals, ponds, tanks and reservoirs comprise the inland fisheries of Kerala. According to the State Fisheries Department, the total production from these sources is at present about 50,000 tons per annum. This represents only 20 per cent of the total fish production in the State. The inland fish production of Kerala, though much lower than that of West Bengal (12,000 tons), compares favourably with that of Madras (40,000 tons).

Estuaries and Backwater Fisheries

5.14 The more important rivers opening directly into the sea and having permanent link with it are the Periyar, Bharatpuzha, Beypore, Billiapatam and Korapuzha. Regular fishing in the estuaries is done only during the south-west monsoon period (end of May to beginning of August) when fishing activities in the sea, owing to rough weather, are almost at a standstill. The estuarine catches include such varieties as Mullets, Milk Fish, Prawns of different types and Horse Mackerel.

5.15 The backwaters of Kerala covering approximately an area of about 300 square miles, are the most important source of inland fish production. The main areas are Ashtamudy, the Kayamkulam and the Vembanad; all situated in the Southern part of the State. The production from estuaries and backwaters is estimated by the State Fisheries Department at about 46,000 tons per annum. Prawns constitute the bulk of the catch which comprises, in addition to Prawns, Mullets, Bekti, Horse Mackerel and Engraulis.

5.16 Chinese nets and stake-nets are the most important type of tackles used in the backwaters. There are about 1,180 Chinese nets and 5,400 stake-nets operating in the State. These nets are registered on payment of an annual licence fee assessed on them.

5.17 A large area of low lying paddy fields adjacent to the backwaters is used for prawn culture. The whole area is enclosed with earthern embankments (5 to 6 feet high) provided with sluice boxes for regulating the flow of water. Prawn culture in paddy fields is done on an extensive scale in Ernakulam and Trichur districts. Cultivation in these fields is restricted to a single crop lasting from July to September. The fishing operations in these fields extend from October upto the middle of April. Fishing is done with bag nets, scoop nets and drag nets. The fields are grouped into three classes on the basis of productivity. The average yields per square mile per annum from I, II and III Class are estimated at 1,080 lbs., 680 lbs. and 330 lbs. respectively. The area under the three classes are shown in Table 26.

5.18 About 80 per cent of the catches consist of prawns. On a modest estimate, the total production of prawns from these fields would be of the order of 4,000 tons. The rest of the catch consists of Mullets, Pearlspot, etc. Most of the prawns caught from the fields are cured and exported to the other States in India, Burma and Ceylon.

5.19 There are three brackish water fish farms in the State, one each at Mallapuram, Narakal and Ayiramthenga. The individual areas of these farms are 52.5, 42.5 and 22 acres respectively. An additional area of 28 acres is being converted into a farm at Ayiramthenga. Two more farms with a total area of 64 acres are also to be established.

River Fisheries.

5.20 The river fisheries in Kerala are very poorly developed. Out of some 44 rivers traversing the State, only four, viz., Bharathapuzha, Periyar, Pamba and Beypore are more than 100 miles long. The more important fresh-water fish belong to the *Barbus* and Cat fish species.

5.21 There is no systematic fishing in the rivers and only a small number of fishermen are dependent on riverine fisheries. Fishing in the rivers is taken up as a hobby by the local people and the catches are utilized for domestic consumption. No data on production and the number of persons engaged are available in regard to river fisheries.

Culture Fisheries

5.22 There are a number of tanks, ponds and reservoirs in Kerala, covering an area of about 6,000 acres, However, the area suitable for fish culture is much less than this. A recent survey of culture fisheries shows that only about 260 acres out of a total area of 1,227 acres surveyed in Trivandrun, Quilon and Alleppey districts are suitable for fish culture.

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

MAP 9

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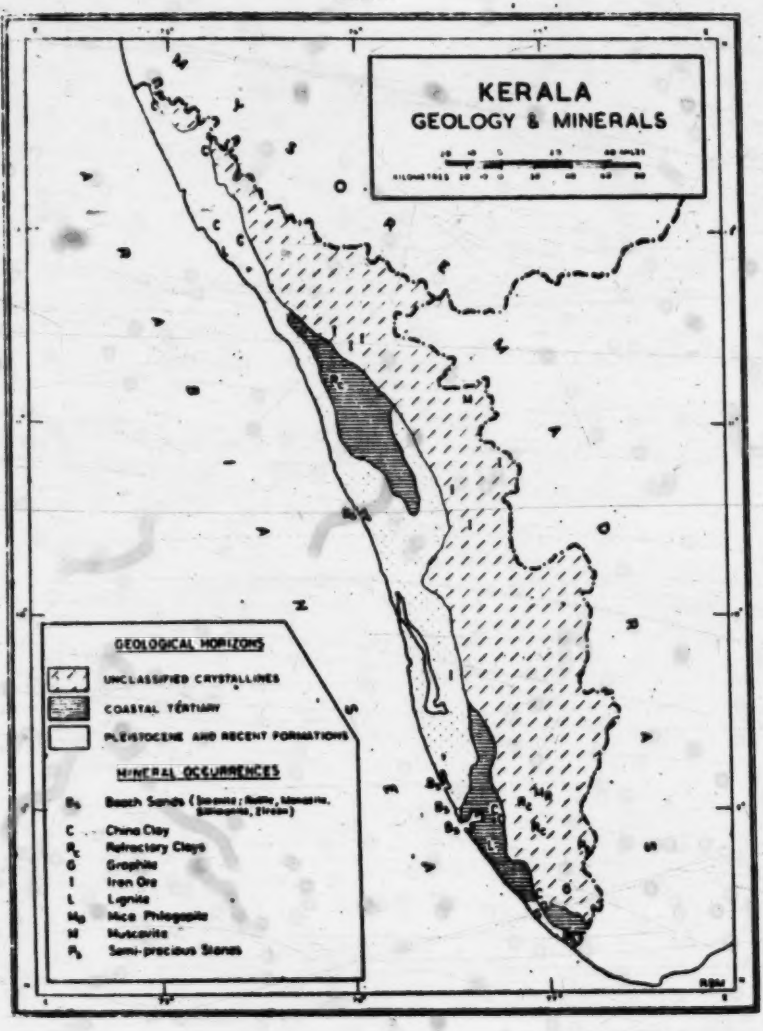

Chapter 7

Power

KERALA HAS IMMENSE potentiality for the generation of hydro-electric power. The State does not possess any resource of coal or oil (within its own boundary) for generation of power but there are 44 rivers which constitute a storehouse of hydel power. This favourable factor compensates for the absence of any fossil fuels. Investigations so far have led to an estimate of this potential to be roughly of the order of 1,539 MW.[1]

7.2 One of the basic problems of Kerala's economy is posed by the situation of acute unemployment prevailing in the State. A long run solution to this lies in an intensive programme of industrialization only. An accelerated pace of industrial development, in turn, requires an ensured supply of adequate power. One possible way of looking at power development activities is to consider power as a complementary factor in the programme of industrialization of the State. Targets for power generation capacity in such cases should be fixed slightly higher than what the demand is expected to be.

7.3 The alternative approach, which is the more feasible one for Kerala, is to consider power, generation itself as an industry and to develop the State's abundant hydro-power resources to the maximum extent possible. The surplus of electricity generated over local requirements could be exported to the neighbouring State of Madras, which is not so well placed in respect of its power resources as Kerala. The electricity exported would provide a means of earning revenue, which is turn could be utilized for capital formation within the State. Moreover, a surplus in power generation capacity is desirable in itself since for a State like Kerala, where some factors deterrent to industrialization have been operating in the past, a regular supply of adequate power should be made to act as an incentive for setting up new industries. Planning for a power surplus and export of electrical energy to the neighbouring States should, therefore, form the keynote of the future power development policy in the State.

DEVELOPMENT OF POWER

7.4 The process of power development in the State is already well set. What is now required is to harness the huge energy potential of the State and convert it

[1] By the Central Water and Power Commission.

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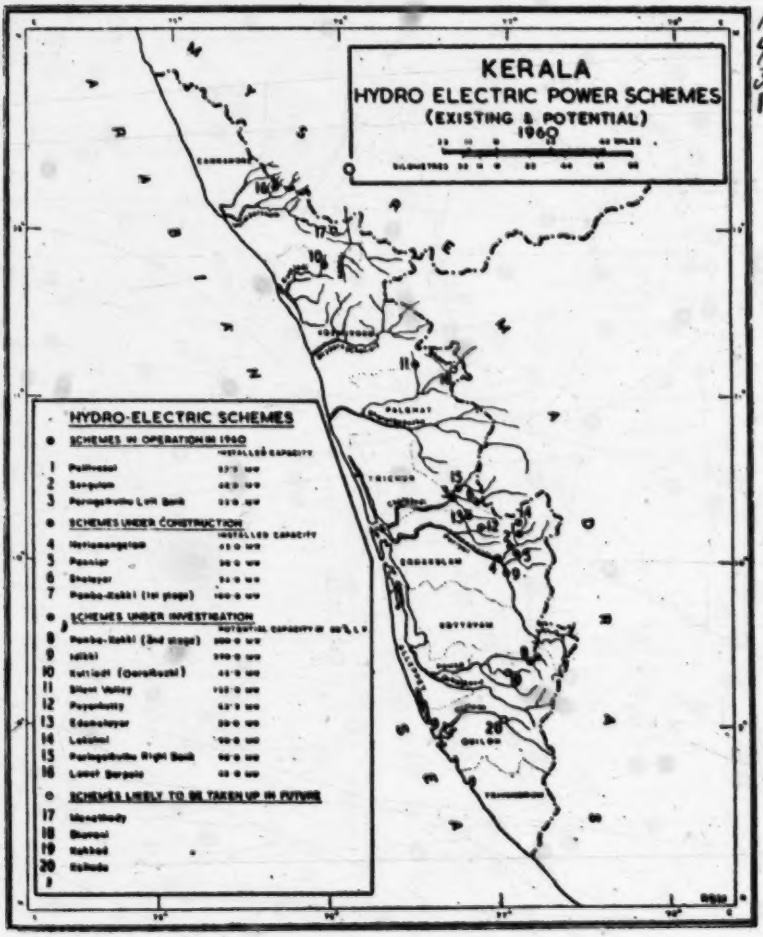
MAP 10



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12:Peter E-5 (1939, 1949)1963 AWll Kerala AWll

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CHAPTER 2

THE POLYANDRY OF THE THANDANS (TIYAS), KAMMALANS, AND OTHER ARTISAN CASTES OF KERALA

Anthropological research in Kerala is not, and never has been, easy. Human society there, as we shall see from what follows, is extremely complex, being made up of innumerable Hindu castes, sub-castes and outcastes, to which must be added other non-Hindu communities, such as the Moslems, Christians, and Jews. To gain an insight into these, or even, as in our case, into only a section of them – namely those practising polyandry – is a painstaking affair, especially when one realizes, as one very soon does, that the customs of a single ethnic group are by no means uniform in the whole state and often vary radically from north to south.

The climate, too, is a problem. Most of Kerala is damp and tropical all the year round, with a very wet period during the summer monsoon from June to October. The record density of the population makes for poor and inadequate quarters in which to live. Communications are bad, the rainy season disrupting traffic quite seriously with floods and high winds because of the physical nature of the land, which can be described as follows.

A. KERALA, A DESCRIPTION

1. ENVIRONMENT

The State of Kerala stretches, today, from the boundary of South Canara in Mysore State in the north, to Cape Comorin in the south, the latter being the most southerly point of the Indian continent. It is an extremely narrow belt of coastland, only five miles wide at some points and never exceeding seventy at its widest, which is at the Palghat gap. It is bordered on the west by the Arabian Sea of the Indian Ocean, in which are to be found the Laccadive islands, administratively part of the State, and on the east, by the imposing range of mountains called the Western

12:Peter E-5 (1939, 1949) 1963 AWll Kerala AWll

Ghats, the height of which varies between five and over eight thousand feet.

Before 1957, when the new State of Kerala came into being with the reorganization of the Indian States, the area included the large Madras district of Malabar, the French possession of Mahe, and the princely State of Cochin amalgamated with that of Travancore. The respective capitals were Calicut (today Kozhikode), Ernakulam, and Trivandrum, the French possession being limited to the town bearing the same name as itself.

All rivers in Kerala, except those of the more elevated taluk of the Wynaad, run from east to west, cutting the coastal strip into sections. Inland, however, vast stretches of practically stagnant water, comparable to lagoons, known locally under the name of backwaters, extend down the whole length of the State, affording uninterrupted communication.

Geologically, Kerala is a low tableland of red laterite and clay, fringed by a coast of alluvial formation. Laterite, from the name given to it by Dr Buchanan in 1800, is really a soil of decomposed gneiss, from which the Western Ghats are made. When dug up and left to the action of sun and rain, only the skeleton of hard material remains, sponge-like in appearance, from which blocks of building material are cut. It is not very resistant or long-lived, and gradually disintegrates into a red type of gravel, more or less finely granulated.

The resultant soil or loam is a well-balanced mixture of clay and sand, admittedly poor in organic matter, but well-suited to the special types of crops which have given Kerala its wealth. Thus rice, coconuts, pepper and betel, arecanuts, jack fruits, mangoes and cashews, do extraordinarily well in it, helped as they are by the damp, warm climate constant throughout the year. There are two monsoons in Kerala, the south-west monsoon of the summer, which is the principal one, and the north-west monsoon of the autumn which, lately, often fails.

In appearance, the landscape of Kerala varies very little from the coastal line to the towering peaks of the Western Ghats. Along the beach of fine sand, coconut trees in an unending perspective, raise their gently waving palm leaves in a manner reminiscent of the South Seas and of Ceylon. Jack fruit trees and mangoes behind them, being of a darker coloured foliage, give depth to the romantic scene. It is among these that the houses of the inhabitants of Kerala are to be found. Unlike the rest of India, human habitations are not grouped together here in villages and towns. Each stands isolated from its neighbours, in a garden-like compound surrounded by a stout fence of brambles or of

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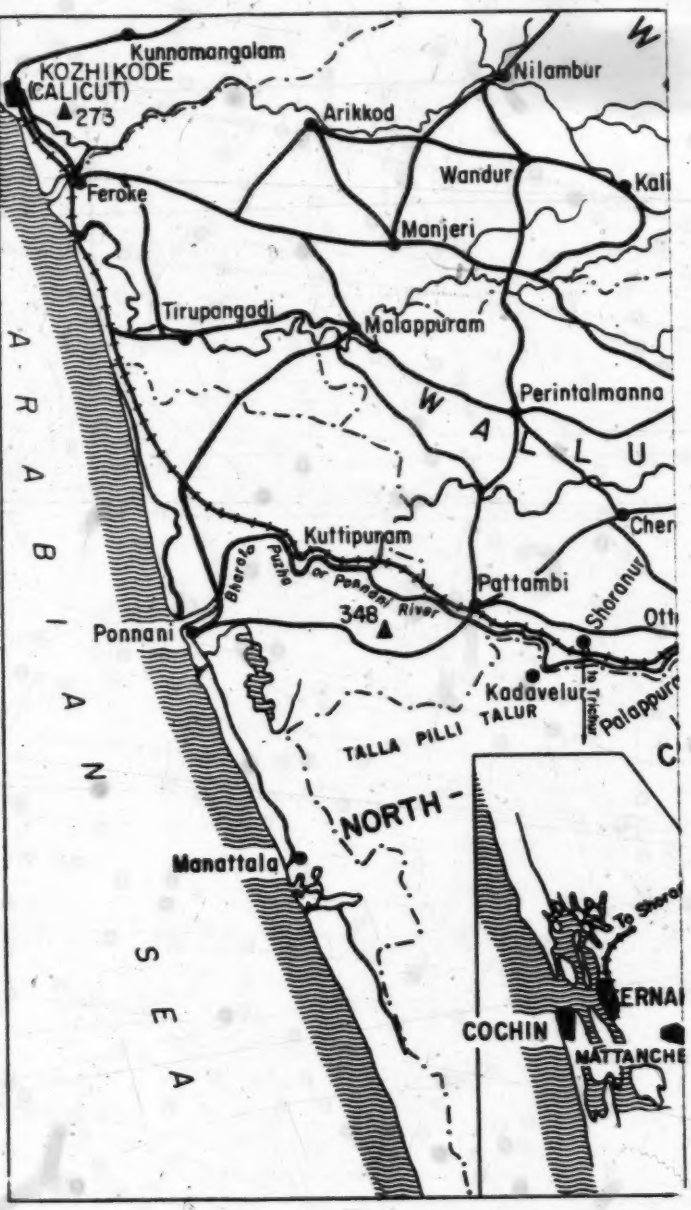
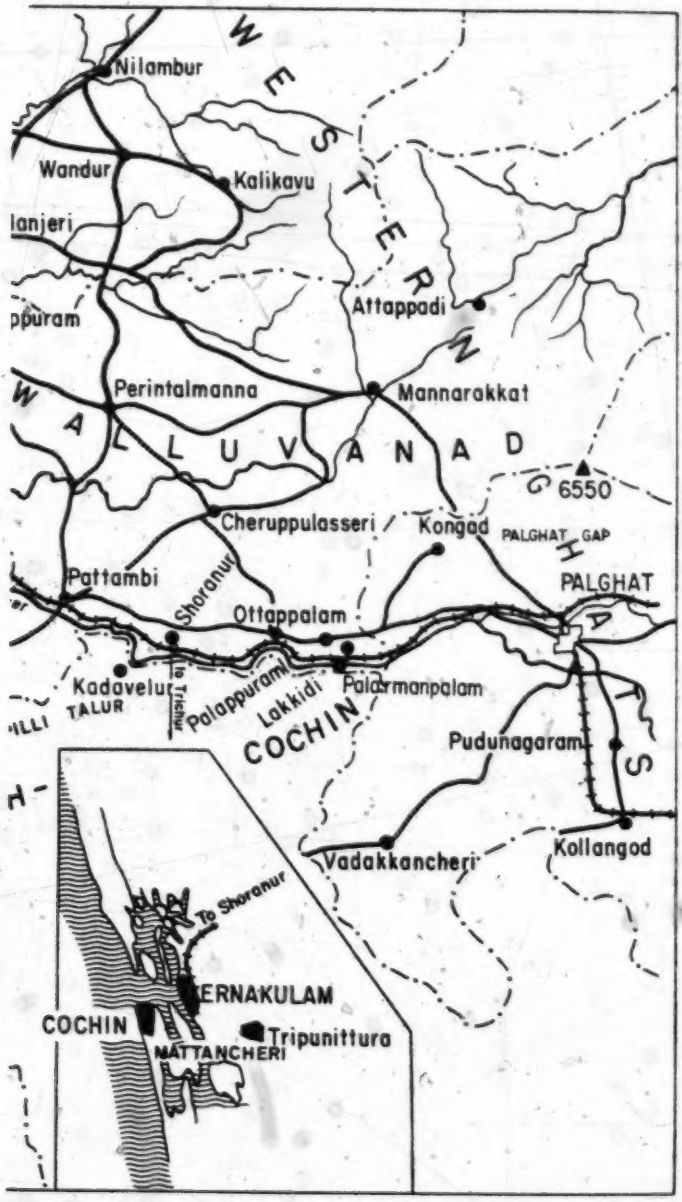


Map II. Map of South Malabar and North Cochin in Kerala.

[facing P. 176-A]



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[facing P. 176-B]

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Fig. 5. A typical Kerala landscape: the red laterite dust road passes between green paddy fields; the blue sky is reflected in the water of the irrigation channel by the side of the road.

[M8]

Fig. 6. A Christian shrine at a crossroads in Cochin.

[P.238 - A]

6:Spate N-4 (no date)1954 AW1 India
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with an output of 5–600 m. tiles a year; local sailing coasters supply markets from Karachi to Colombo, and there is some export via Bombay to E Africa, Persia, and Malaya. But competition from Malabar and, much more serious from cement and asbestos roofing is adversely affecting the industry, which appears to be declining.[40] Other industries are of little importance: iron-founding (ancillary to the tile factories), and soap, based on local and imported copra; Mangalore is the main port for the Laccadive islanders. A feature of some interest is the prominence of Portuguese names among the larger concerns, both in coffee-curing and in tile-making.

Kerala

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Both physically and culturally Kerala is one of the most distinctive regions of India.[41] Historically it has been somewhat isolated from the rest of the Peninsula, but accessible to maritime influences. Homogeneous in speech, it is probably more caste-divided than any other area, and it is here that 'untouchability' developed the more fantastic extremes of 'unapproachability' and even 'unseeability', while the Nairs who form the bulk of the minor gentry preserve a matrilinear organisation in which both polygamy and polyandry play a part.[42] Perhaps by reaction against caste, the region has the highest percentage of Christians in all India—28·8 in Cochin and 32·3 in Travancore. This element long antedates the vigorous Portuguese missions, which succeeded in bringing into the Roman fold most of the 'Syrian' (i.e. Nestorian) Christians, whose traditions go back to St Thomas the Apostle; there were Christian communities 1500 years ago. The 'White Jews' of Cochin are another ancient fossil kith; their number is only a few hundreds, but their origin is claimed to be from a Solomonic colony and is undoubtedly very ancient. But there is no end to the ethnographical fascinations of Kerala.

Ke 133

The Physical Setting

Tokens of uplift are numerous and decisive, including the existence of coral reefs below the alluvium some miles from the present coast.[43]

[40] U. Hammaba, *ibid.*, 291–99.

[41] Based mainly on a series of papers by G. Kuriyan in *JMGA* and *IGJ*: "The Industrial Crops of Kerala" (XI (1937), 283–90 and XII (1937), 1–8); "Population and its Distribution in K." (XIII (1938), 125–46); "The Geographic Basis of the Legendary Origin of K." (XVI (1941), 340–54); "Some Aspects of the Regional Geography of K." (XVII (1942), 1–41). On Cochin I am indebted for first-hand information to Sir Robert Bristow, CIE, to whom the development of the modern port is largely due.

[42] The best easily accessible account for geographers is in C. D. Forde, *Habitat, Economy and Society* (1934 and later eds.), Ch. XIII. See also G. Slater, *Southern India* (1936), Chs. XVI–XVII.

[43] Legend ascribes the formation of Kerala to the impatience of a local saint ("during the thousandth year after the [biblical] flood") with the unspecified improprieties of his aged mother. He threw an axe from Gokarna (near Goa) over the sea; it flew to Cape Comorin and the sea retreated beneath its flight. This does correspond with the actual area of emergence.

6:Spate N-4 (no date)1954 AW1 India
Kerala AW11

Literary and place-name evidence points to continuing growth of the land within proto-historic or even historic times. It seems likely that there were at least two phases of relative upward movement, represented by erosion surfaces in the laterite at around 250 and 600 ft, while the last stage—that reflected in legend and literature—added the eight miles or so between the existing shore and a line of villages of whose names 'sea' or 'island' is a component; some places mentioned by Ptolemy as sea-ports now lie at a similar distance inland. But all these are near the great Cochin backwater, which suggests—as do the large-scale maps—that normal prograding on a low shoreline of emergence is responsible for this accretion, rather than an actual change of levels. Probably associated with this are the Malabar mudbanks, which lie off all the river mouths. They are up to eight miles long, and their extremely finely comminuted lateritic mud forms as it were an emollient which deadens the ocean swell; in their lee are safe roadsteads for the small ports of the coast.

The general tripartite longitudinal division is found: alluvial coastland, low lateritic plateaus and foothills, gneissic highlands. The division is indeed rather more clear cut than in the more complex Nn lowlands, but each zone has certain peculiarities. In the alluvium is the great development of lagoons and backwaters, saline or fresh, which, with some artificial cuts, form splendid waterways for some 150 miles from the Ponnani mouth to Trivandrum. The largest of these, behind Cochin, widens out Swds into Vembanad Lake. The laterites (including the ?Pliocene Warkalais) form plateaus at 200–600 ft, with much grass and scrub; into them project spurs of the Anaimalai-Cardamom Hills which, S of Palghat, have a very strong SE–NW trend, shown by the Periyar Valley. The hills themselves, rain-swept and forested, will be treated in the next chapter, but it may be noted here that the plantation agriculture of Kerala is confined to them, and the development of hydro-electricity from Pallivasal is of great importance to the agriculture and industry of the lowland.

The Ponnani, the headwaters of which rise on the Nn slopes of the Anaimalais, leads up to the Palghat Gap, nearly 20 miles wide and not much over 1100 ft on its broad sill, which lies beyond the regional limits. Farther S the higher (nearly 1500 ft) and much narrower Shencottah Gap gives access to the extreme S of Madras. It is noteworthy that in both these gaps there were exclaves of Cochin and Travancore territory, extending well E of the watershed in the latter; these, with the ancient walls across the Comorin lowland, emphasise the importance of these sole easy points of contact between Kerala and Tamilnad.

Climate and Agriculture

The climate represents the nearest approach in India to equatorial conditions. Maximum temperatures rarely exceed 90° F., minima rarely fall

6:Spate N-4 (no date)1954 AWI India
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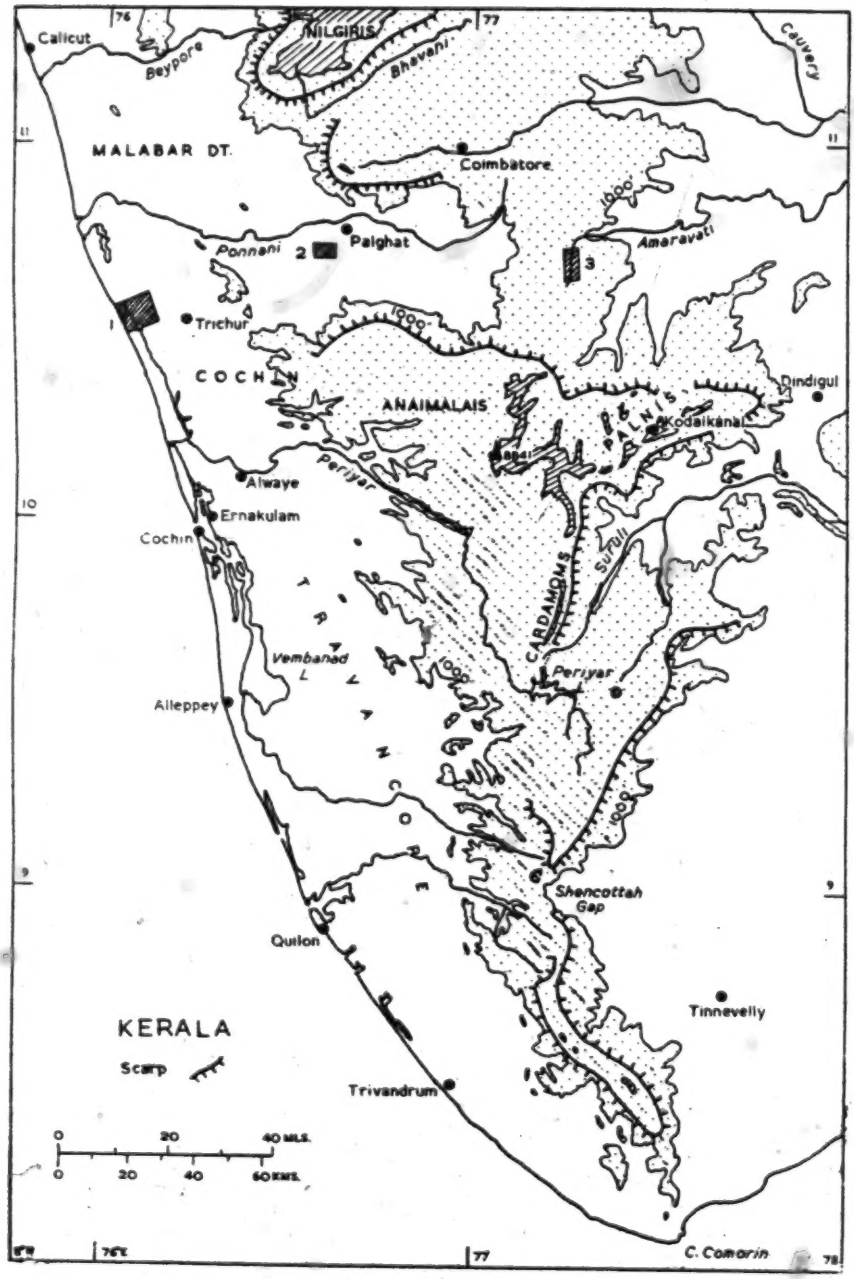

Fig. 121.—KERALA. 1, area of Fig. 122; 2, of Fig. 123; 3, of Fig. 146. 1000–6000 ft stippled, over 6000 ft shaded.

6:Spate N-4 (no date)1954 AW1 India
Tamil AW16
Kerala AW11

atypical. Much of it indeed revolves around the hill-station of Ootacamund, lying under the highest point of the plateau, Dodabetta (8760 ft). 'Ooty' and its satellites Wellington and Coonor have the usual hills layout of straggling bungalows; they are reached by a metre-gauge rack-railway with gradients of 1 in 12½. There is a little local industry of the kind associated with resort functions: breweries (now presumably under a cloud), sodawater factories, and so on; tea, quinine, and eucalyptus oil are processed, and at Wellington the Government cordite factory had one of the earliest hydro-electric installations in India. Of much greater importance is the power station at Pykara Falls, with an installed capacity of 38,750 kW; large extensions are planned, and in addition the utilisation of the Pykara tail-water over a 1200-ft drop in the Moyar Valley, to produce another 36,000 kW, forming a new link with Mettur. This is in the future; but already the leisure resort of S India has become one of the most vital nodes in its workaday life.

(b) *The Anaimalais, Palnis, and Cardamoms*

This remarkable group of hills (Figs. 121, 150) is more complex than the Nilgiris, and in Anaimudi itself they have the highest peak of the Peninsula, 8841 ft. The front to the Palghat Gap is remarkably steep and in the E remarkably straight; the SE flanks of the Palnis, overlooking the upper Vaigai re-entrant, are also remarkably abrupt, as are the Cardamoms and their protrusions (Varushanad Hills) S of the Vaigai. But to the NW the hills fray out into long SE–NW ridges; and indeed over much of the area this trend is most marked, the rivers (e.g. the Periyar) having longitudinal stretches of such straightness as to suggest control by faults, with transverse gorges producing a perfect trellis-pattern. Between 10° N and the Shencottah Gap the active streams of the exposed Arabian Sea front have pushed the watershed back to within 4 or 5 miles of the En edge of the hills: here the change from jungle-clad mountains to the tank-pitted Tamilnad Plain is very sudden (Fig. 150).

Again, apart from the shifting cultivation of tribes some of whom (e.g. Cochin Kadars) are hardly more than hunters and gatherers, the economy is atypical: forests, plantations, hydro-electricity. The most exploited forests, served by special light railways, are in the NW, the Cochin slopes of the Anaimalais. As for plantations, these are not confined to the Wn flanks but are more numerous there, where there is a broader plateau development than on the E. A little coffee and tea are grown in Cochin and in Madura Dt (Madras), but the major share of the plantations (78,000 ac. tea, *c.* 6000 coffee) is in Travancore, which is also by far the most important rubber-producing area of India, with nearly 100,000 ac. bearing against 13,000 in Malabar and 10,000 in Cochin (1945). It is grown on the lower slopes generally below 1000 and never above 2000 ft, with 80–120 ins.

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MALABAR DISTRICT.

GURUVAYUR (PONNANI TALUK)

[*By V. Lakshmana Aiyar, Christian College, Madras.*]

Preliminary.—Guruvayur is situated in the southern part of the Ponnani taluk, and is only 2 miles distant from the Arabian Sea. It is close to the backwater which extends from the northern point of the taluk to Cochin and Travancore. To the east it is only 3 miles distant from the State of Cochin. It is 14 miles away from the capital town of the taluk through which flows the chief river of Malabar. No forests can be seen throughout the whole taluk. The whole taluk is one red sandy mass with no waste lands, no mountains or hills. The chief crop of the village and perhaps of the whole taluk is coconut.

Malabar land tenure.—The system of land tenure that obtains in Malabar is entirely different from that of other districts. No doubt the theory that the Government is the legitimate owner of all the land in India and the people hold the land from the Government to which they pay a rent or tax, obtains its full significance here also. But there is an intermediary landlord, between the Government and the actual occupier of the land. How this intermediary landlord arose requires some explanation.

The origin of Malabar according to tradition is that a demi-god Parasurama reclaimed from the sea the portion of land extending from Gokarnam (Bombay) to Cape Comorin and from the Western Ghats to the sea. This demi-god having killed 21 times all the Kshatriyas, and having surrendered to Rama all his possessions after trial of battle, wanted a place to live in. He ordered the sea to recede and thus formed these lands. Malabar is a portion of that land. What historical facts are concealed in this tradition it is not easy to know but it may be guessed that in the general organizing of the Deccan, a certain number of Aryans * crossed the Western Ghats and reclaimed the lands from forest and wild beasts and made it habitable for civilized men. They may have dominated the original inhabitants by their superior civilization and Parasurama may have been the leader of that little band of Aryans. The tradition says that the demi-god gave all the lands he created to 64 Brahmans who became the leaders of the 64 villages into which the whole of the land was divided. These 64 Brahmans formed the original Malabar Brahmans or Nambudris, and they formed an assembly and decided matters of common concern. Individual villages decided their own matters and in every discussion of their affairs the Brahmana was the president and his opinion had perhaps the force of law. The whole village belonged to him and he was the Uralla or the chief man of the village. As time went on the one important family extended its branches and each branch had an equal voice in the affairs of the village. The one became many. I shall refer later to the remnants of this constitution of the village.

* [This hypothesis is ingenious, but not, in my opinion, probable.—Ed.]

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KOTHACHIRA DESAM (PONNANI TALUK).

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Preliminary.—This desam is situated about 13 miles south-east of Ponnani, a small thriving town at the mouth of the river of the same name, a Muhammadan centre and the headquarters of the taluk. The visitor to Kothachira leaves the train at Pattambi, the nearest railway station and after a six miles walk along the Pattambi-Chowghat road turns to the left and by a footpath over a rising eminence descends into the paddy fields. A two miles walk southwards through these fields will bring him to the borders of the Kothachira desam.

This desam is a completely rural area and there is nothing of interest in the place. The shortest distance from the nearest river (river Ponnani) is 5 miles. Hills and forests are not rare since the desam enjoys proximity to the Akalanum (east) and the Mattur (north) hills.

The term 'desam' literally means a piece of territory. The desam is the political and social unit in Malabar, and is the nearest equivalent to the villages of the east. The chief differences, however, are—(1) the village organization, in its entirety, is not found here; (2) the village has no particular site. The population is distributed throughout the desam area, each individual landholder having his home and family compound often in the midst of his lands and gardens and separated far from his neighbours.

Population.—The population of this desam according to the censuses of 1891 and 1901 was as follows:—

Year of census.	Number of inhabited houses.	Total population.			Religion.			Occupation.				Population per 100 acres of occupied land.
		Males.	Females.	Total.	Hindus.	Muhammadans.	Others.	Landholders.	Labourers.	Weavers.	Others.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1891 ...	295	898	985	1,883	1,678	204	1	767	563	...	553	221
1901 ...	312	961	1,047	2,008	1,808	200	...	559	378	...	1,071	236

The report of the last census (that of 1911) is not obtainable. My enquiry gives the following results:—

Number of houses 333.

Males	...	1,216	Hindus	...	1,990	Landholders	... 442
Females	...	1,107	Muhammadans.		327	Labourers	... 518
			Others	...	6	Weavers	... ...
						Others *	... 1,363
Total	...	2,323			2,323		2,323

* Including all who have no regular occupation, children, women of higher castes, old men, and even a good many young men belonging to joint families.